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FIG. 1A

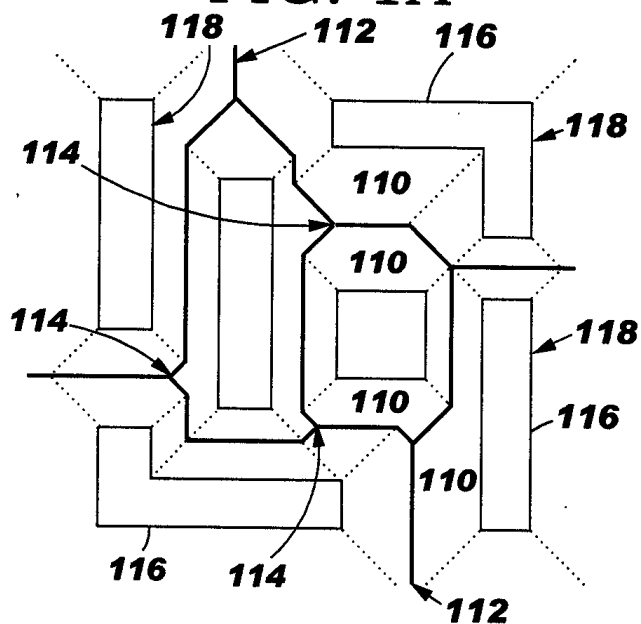


FIG. 2

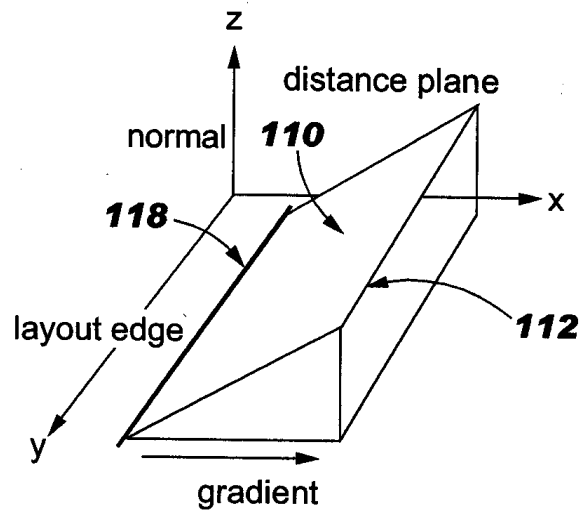
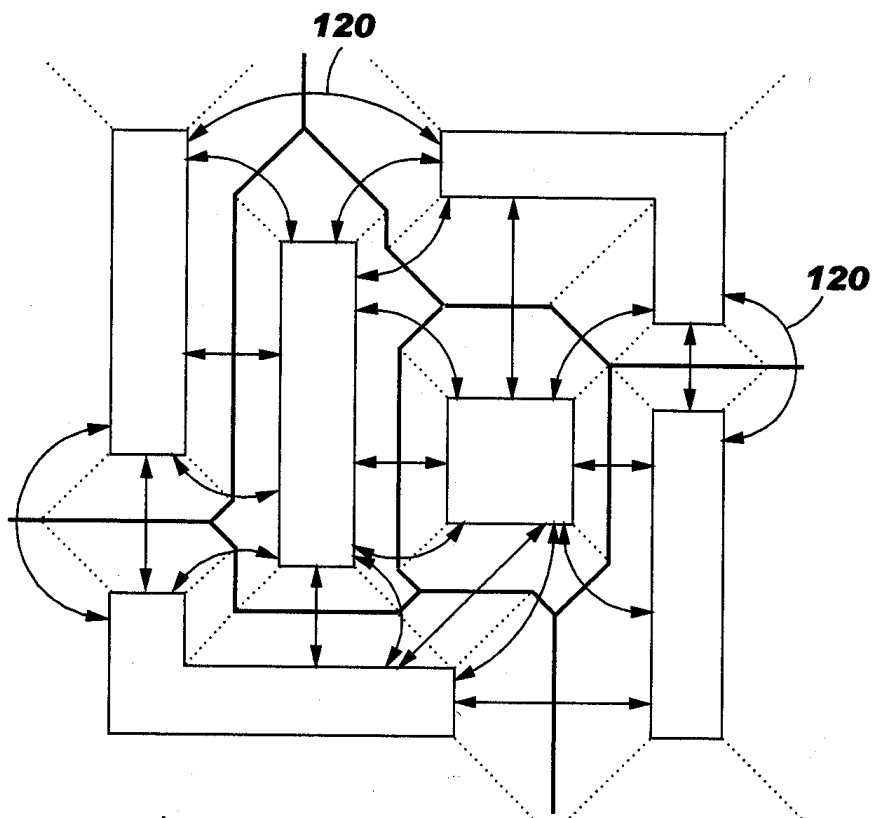


FIG. 1B



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FIG. 3

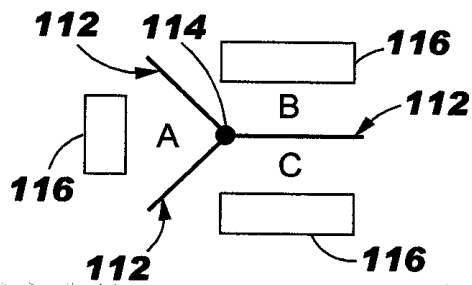


FIG. 4

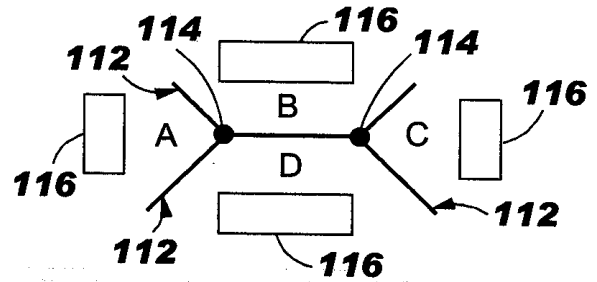


FIG. 5

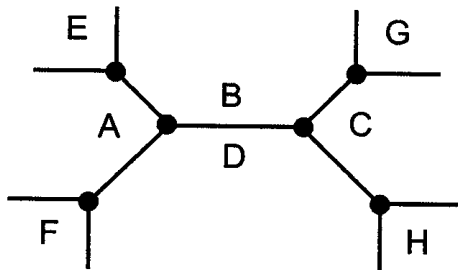


FIG. 6A

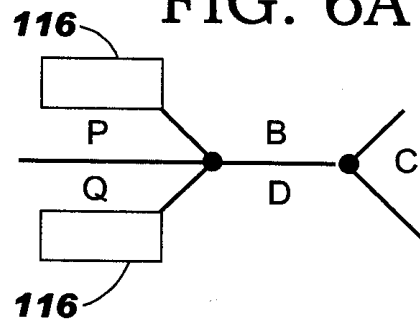


FIG. 6B

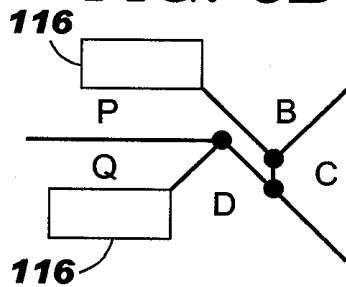


FIG. 6B

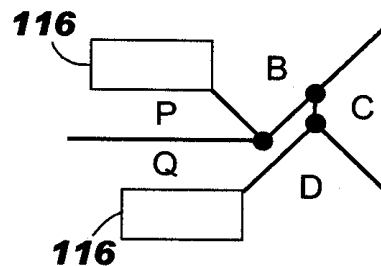
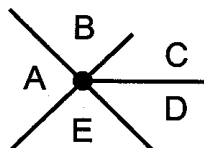


FIG. 7A



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FIG. 7B

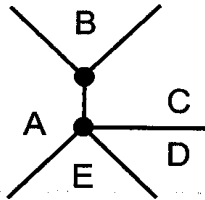


FIG. 7C

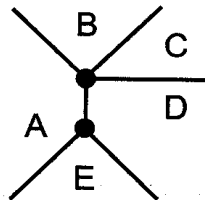


FIG. 7D

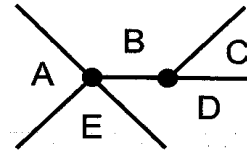


FIG. 7E

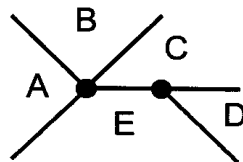


FIG. 7F

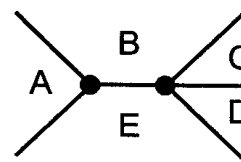
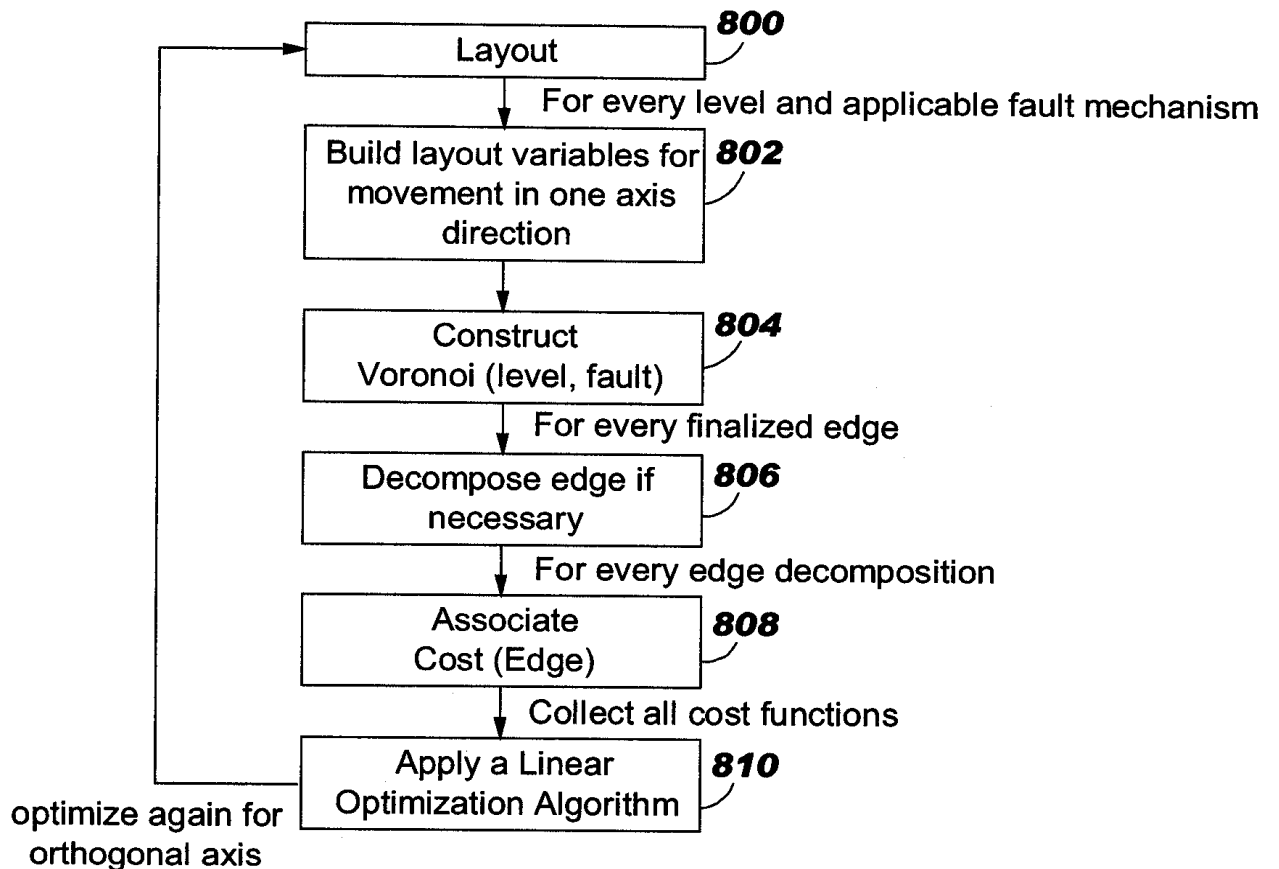


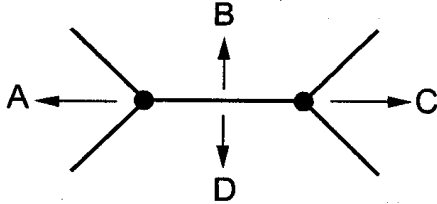
FIG. 8



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FIG. 9A

Bisector(A, B, C, D) = a rotation or reflection of gradients((-1,0), (0,1), (1,0), (0,-1))



$$widthCA = x_C - x_A$$

$$widthBD = y_B - y_D$$

$$CriticalArea = - \frac{k(widthCA - widthBD)}{widthBD}$$

$$widthCA - widthBD \geq 0$$

$$widthBD \leq 0$$

FIG. 9B

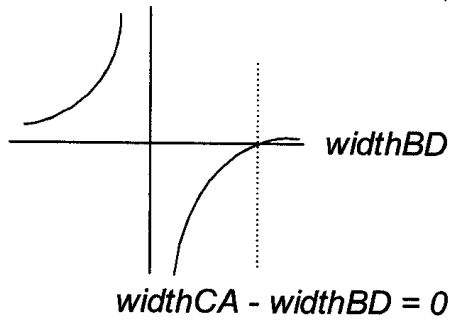


FIG. 9C

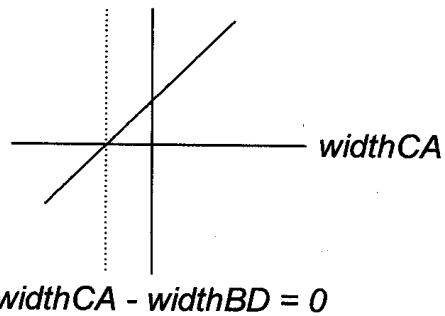
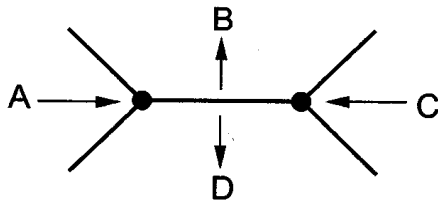


FIG. 10A

Bisector(A, B, C, D) = a rotation or reflection of gradients ((1,0), (0,1), (-1,0), (0,-1))



$$widthCA = x_C - x_A$$

$$widthBD = y_B - y_D$$

$$CriticalArea = - \frac{k(widthCA + widthBD)}{widthBD}$$

$$widthCA + widthBD \geq 0$$

$$widthBD \leq 0$$

FIG. 10B

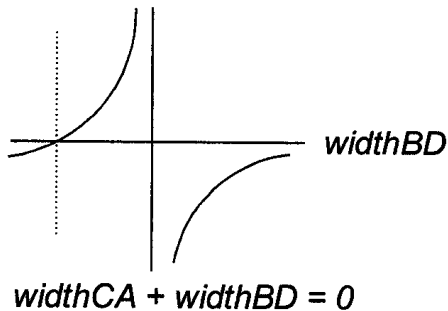
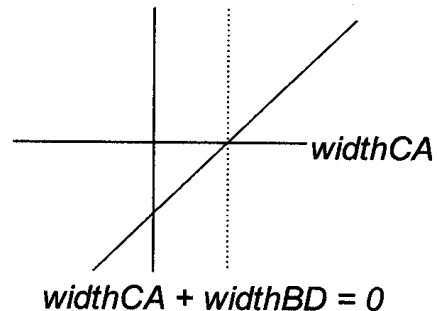


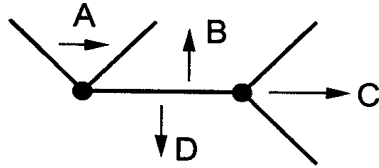
FIG. 10C



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FIG. 11A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((1,0), (0,1), (1,0), (0,-1))$



$$widthCA = x_C - x_A$$

$$widthBD = y_B - y_D$$

$$CriticalArea = -k \frac{widthCA}{widthBD}$$

$$widthCA \geq 0$$

$$widthBD \leq 0$$

FIG. 11B

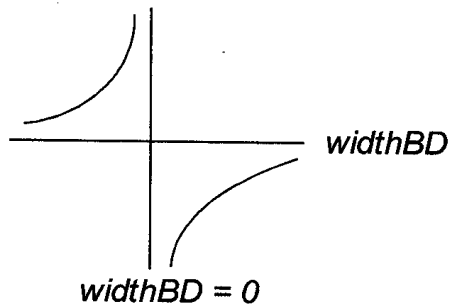


FIG. 11C

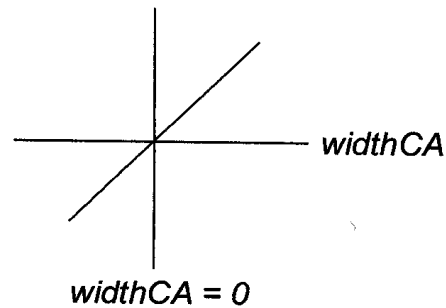
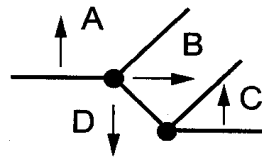


FIG. 12A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((0,1), (1,0), (0,1), (0,-1))$



$$widthDC = y_D - y_C$$

$$widthDA = y_D - y_A$$

$$CriticalArea = \frac{k}{2} \ln \frac{widthDC}{widthDA}$$

$$widthDC - widthDA \geq 0$$

$$widthDA \geq 0$$

FIG. 12B

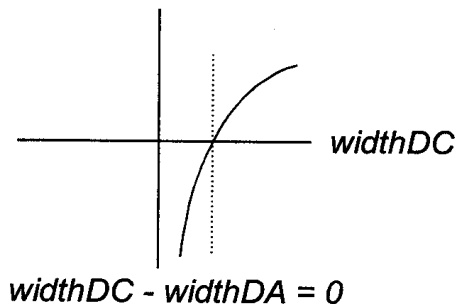
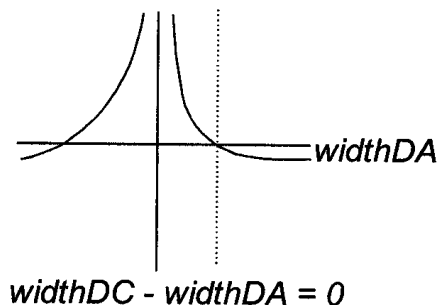


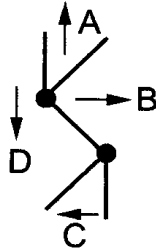
FIG. 12C



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FIG. 13A

Bisector(A, B, C, D) = a rotation or reflection of gradients ((0,1), (1,0), (-1,0), (0,-1))



$$widthDA = y_D - y_A$$

$$widthCB = x_C - x_B$$

$$CriticalArea = \frac{k}{2} \ln \frac{widthCB}{widthDA}$$

$$widthCB - widthDA \geq 0$$

$$widthDA \geq 0$$

FIG. 13B

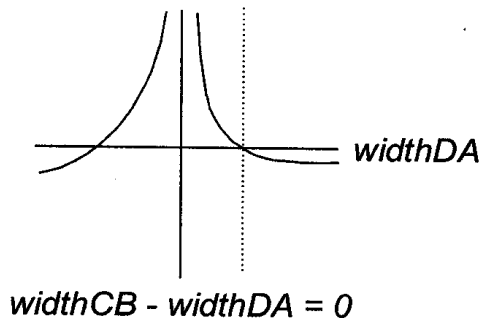


FIG. 13C

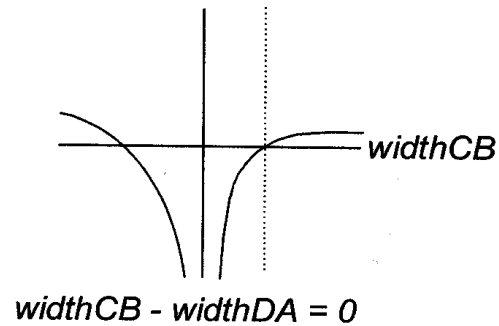
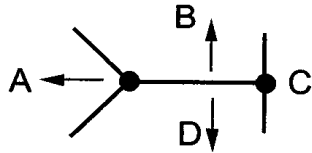


FIG. 14A

Bisector(A, B, C, D) = a rotation or reflection gradients ((-1,0), (0,1), $\beta(1,0)$, (0,-1))



$$widthCA = x_C - x_A$$

$$widthBD = y_B - y_D$$

$$CriticalArea = -\frac{k \left(widthCA - \frac{1}{2} widthBD \right)}{widthBD}$$

$$widthCA - \frac{1}{2} widthBD \geq 0$$

$$widthBD \leq 0$$

FIG. 14B

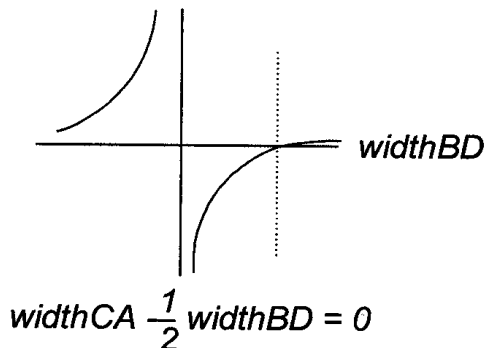
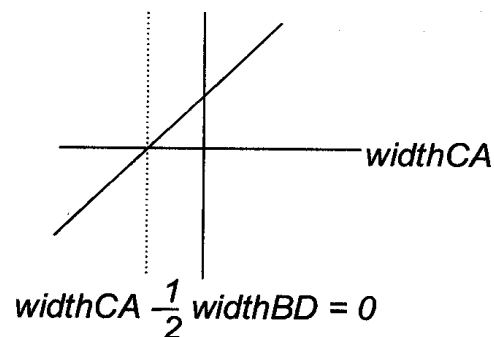


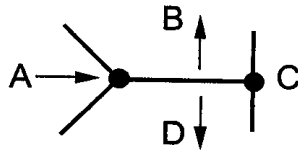
FIG. 14C



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FIG. 15A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((1,0), (0,1), \beta(1,0), (0,-1))$



$$\text{widthCA} = x_C - x_A$$

$$\text{widthBD} = y_B - y_D$$

$$\text{CriticalArea} = -\frac{k(\text{widthCA} + \frac{1}{2} \text{widthBD})}{\text{widthBD}}$$

$$\text{widthCA} + \frac{1}{2} \text{widthBD} \geq 0$$

$$\text{widthBD} \leq 0$$

FIG. 15B

FIG. 15C

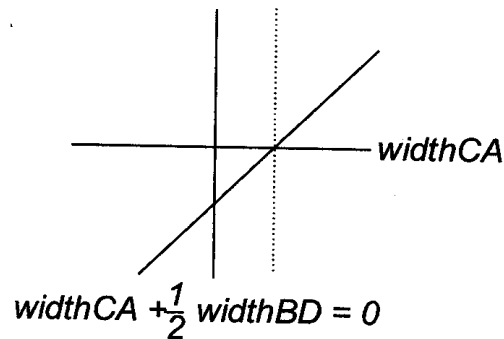
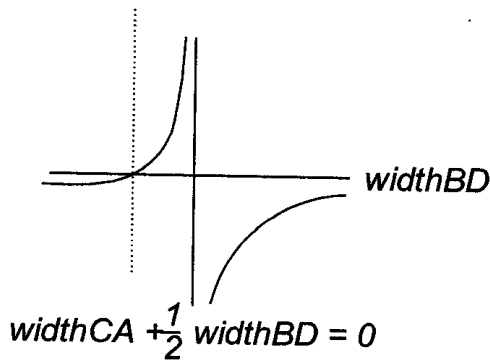
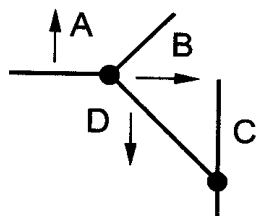


FIG. 16A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((0,1), (1,0), \beta(1,0), (0,-1))$



$$\text{widthDA} = y_D - y_A$$

$$\text{widthCB} = x_C - x_B$$

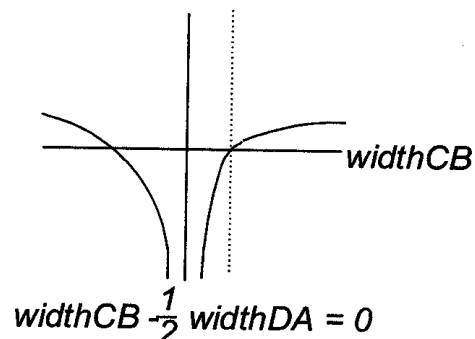
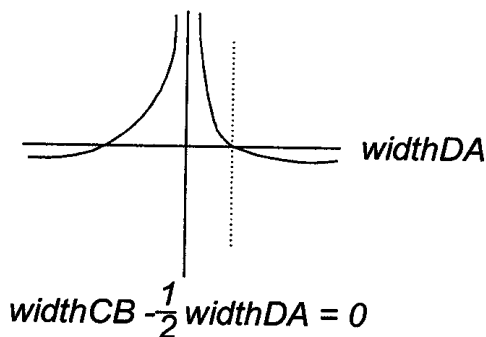
$$\text{CriticalArea} = \frac{k}{2} \left(\ln \frac{\text{widthCB}}{\text{widthDA}} + \ln 2 \right)$$

$$\text{widthCB} - \frac{1}{2} \text{widthDA} \geq 0$$

$$\text{widthDA} \geq 0$$

FIG. 16B

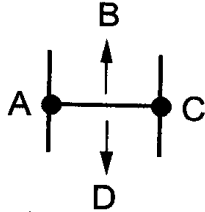
FIG. 16C



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FIG. 17A

Bisector(A, B, C, D) = a linear transformation of $(\beta(1,0), (0,1), \beta(1,0), (0,-1))$



$$widthCA = x_C - x_A$$

$$widthBD = y_B - y_D$$

$$CriticalArea = -k \frac{widthCA}{widthBD}$$

$$widthCA \geq 0$$

$$widthBD \leq 0$$

FIG. 17B

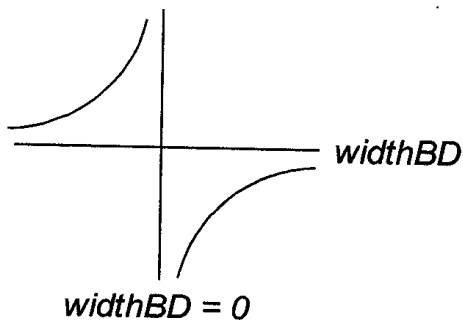


FIG. 17C

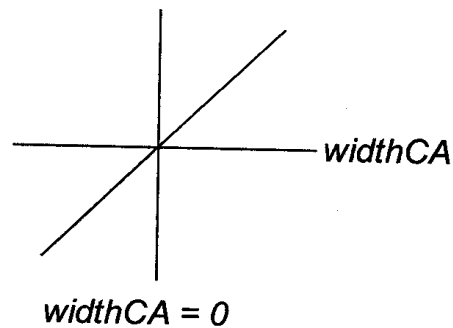
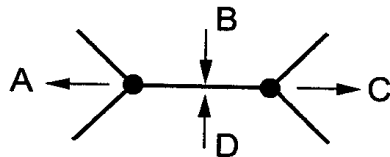


FIG. 18A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((-1,0), (0,-1), (1,0), (0,1))$



$$widthCA = x_C - x_A$$

$$widthBD = y_B - y_D$$

$$CriticalArea = -\frac{k (widthCA + widthBD)}{widthBD}$$

$$widthCA + widthBA \geq 0$$

$$widthBD \geq 0$$

FIG. 18B

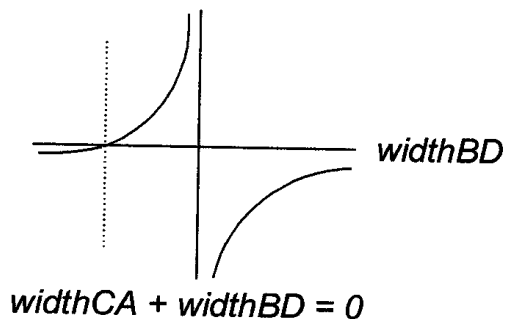
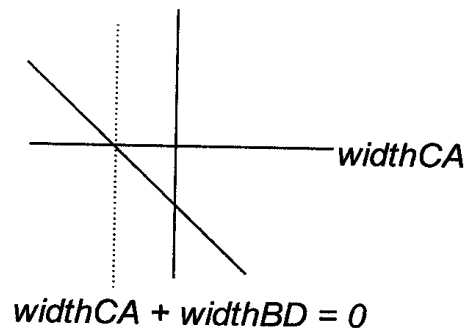


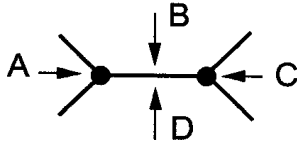
FIG. 18C



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FIG. 19A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((1,0), (0,-1), (-1,0), (0,1))$



$$\text{widthCA} = x_C - x_A$$

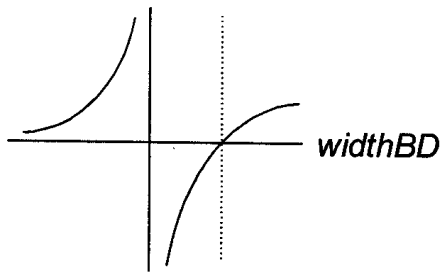
$$\text{widthBD} = y_B - y_D$$

$$\text{CriticalArea} = -\frac{k (\text{widthCA} - \text{widthBD})}{\text{widthBD}}$$

$$\text{widthCA} - \text{widthBD} \geq 0$$

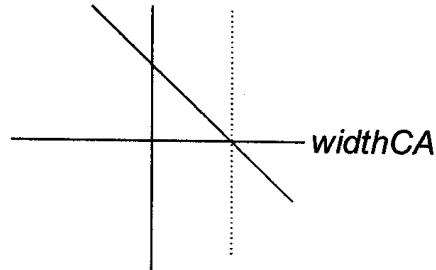
$$\text{widthBD} \geq 0$$

FIG. 19B



$$\text{widthCA} - \text{widthBD} = 0$$

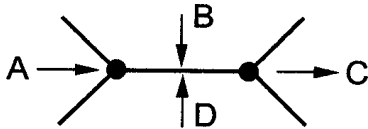
FIG. 19C



$$\text{widthCA} - \text{widthDB} = 0$$

FIG. 20A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((1,0), (0,-1), (1,0), (0,1))$



$$\text{widthCA} = x_C - x_A$$

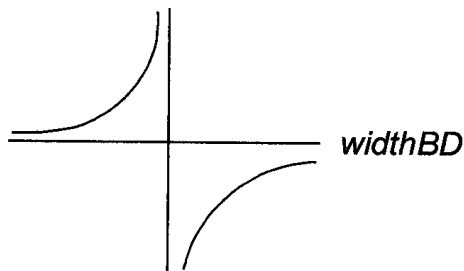
$$\text{widthBD} = y_B - y_D$$

$$\text{CriticalArea} = -k \frac{\text{widthCA}}{\text{widthBD}}$$

$$\text{widthCA} \geq 0$$

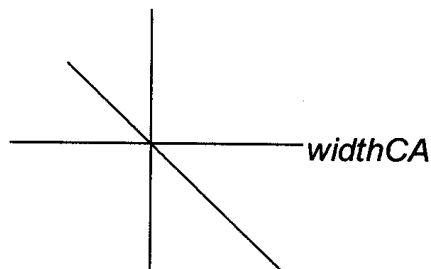
$$\text{widthBD} \geq 0$$

FIG. 20B



$$\text{widthBD} = 0$$

FIG. 20C

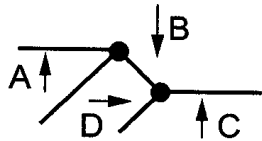


$$\text{widthCA} = 0$$

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FIG. 21A

Bisector(A, B, C, D) = a rotation or reflection of gradients ((0,1), (0,-1), (0,1), (1,0))



$$widthBC = y_B - y_C$$

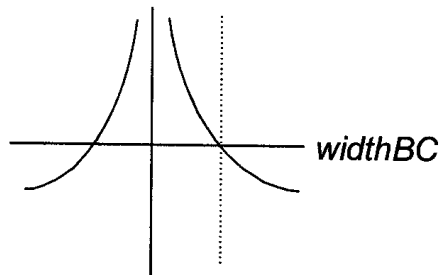
$$widthBA = y_B - y_A$$

$$CriticalArea = -\frac{k}{2} \ln \frac{widthBC}{widthBA}$$

$$widthBC - widthBA \geq 0$$

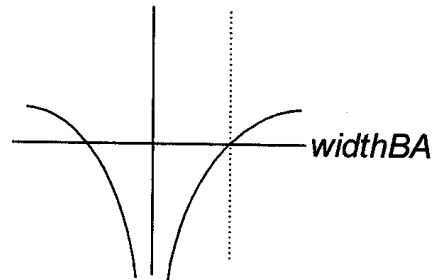
$$widthBA \geq 0$$

FIG. 21B



$$widthBC - widthBA = 0$$

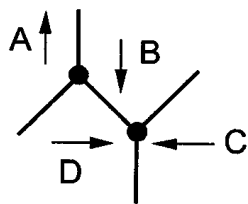
FIG. 21C



$$widthBC - widthBA = 0$$

FIG. 22A

Bisector(A, B, C, D) = a rotation or reflection of gradients ((0,1), (0,-1), (-1,0), (1,0))



$$widthBA = y_B - y_A$$

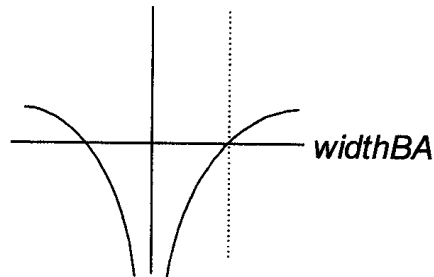
$$widthCD = x_C - x_D$$

$$CriticalArea = -\frac{k}{2} \ln \frac{widthCD}{widthBA}$$

$$widthCD - widthBA \geq 0$$

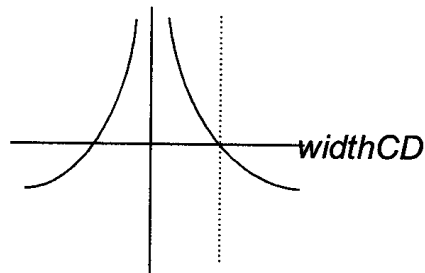
$$widthBA \geq 0$$

FIG. 22B



$$widthCD - widthBA = 0$$

FIG. 22C

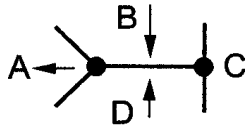


$$widthCD - widthBA = 0$$

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FIG. 23A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((-1,0), (0,-1), \beta(1,0), (0,1))$



$$\text{widthCA} = x_C - x_A$$

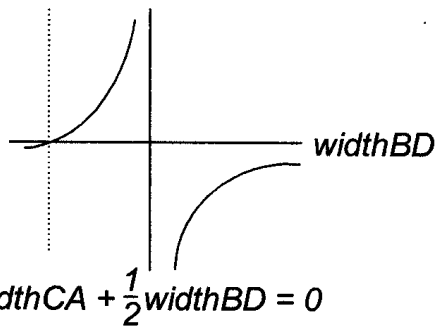
$$\text{widthBD} = y_B - y_D$$

$$\text{CriticalArea} = - \frac{k \left(\text{widthCA} + \frac{1}{2} \text{widthBD} \right)}{\text{widthBD}}$$

$$\text{widthCA} + \frac{1}{2} \text{widthBD} \geq 0$$

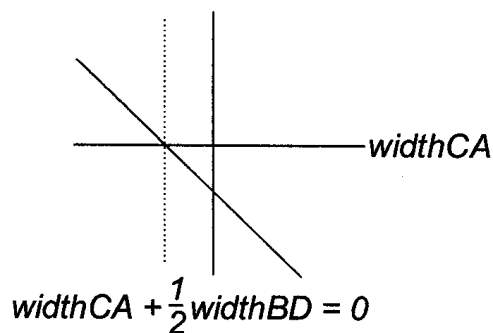
$$\text{widthBD} \geq 0$$

FIG. 23B



$$\text{widthCA} + \frac{1}{2} \text{widthBD} = 0$$

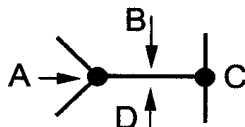
FIG. 23C



$$\text{widthCA} + \frac{1}{2} \text{widthBD} = 0$$

FIG. 24A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((1,0), (0,-1), \beta(1,0), (0,1))$



$$\text{widthCA} = x_C - x_A$$

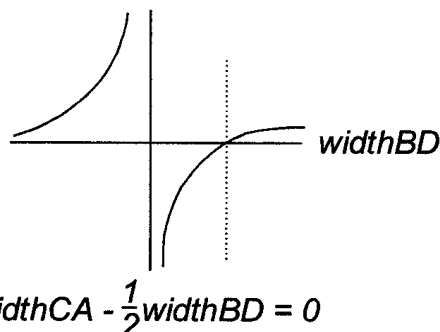
$$\text{widthBD} = y_B - y_D$$

$$\text{CriticalArea} = - \frac{k \left(\text{widthCA} - \frac{1}{2} \text{widthBD} \right)}{\text{widthBD}}$$

$$\text{widthCA} - \frac{1}{2} \text{widthBD} \geq 0$$

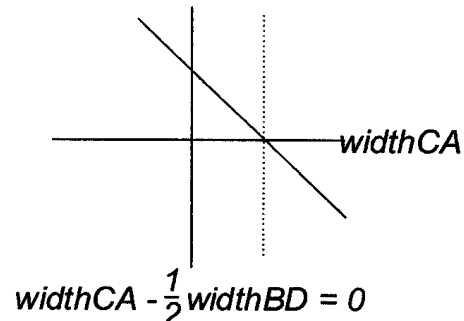
$$\text{widthBD} \geq 0$$

FIG. 24B



$$\text{widthCA} - \frac{1}{2} \text{widthBD} = 0$$

FIG. 24C

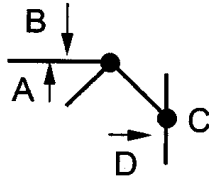


$$\text{widthCA} - \frac{1}{2} \text{widthBD} = 0$$

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FIG. 25A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((0,1), (0,-1), \beta(1,0), (1,0))$



$$\text{widthDC} = y_D - y_C$$

$$\text{widthBA} = y_B - y_A$$

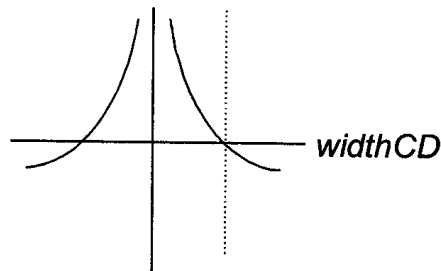
$$\text{CriticalArea} = -\frac{k}{2} \left(\ln \frac{\text{widthCD}}{\text{widthBA}} + \ln 2 \right)$$

$$\text{widthCD} - \frac{1}{2} \text{widthBA} \geq 0$$

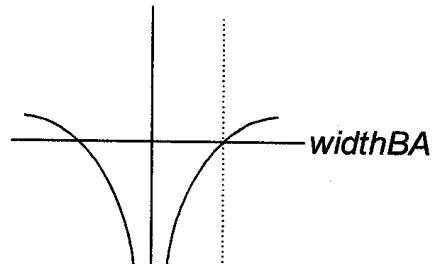
$$\text{widthBA} \geq 0$$

FIG. 25B

FIG. 25C



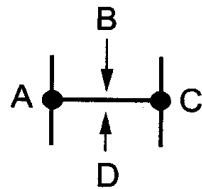
$$\text{widthCD} - \frac{1}{2} \text{widthBA} = 0$$



$$\text{widthCD} = \frac{1}{2} \text{widthBA} = 0$$

FIG. 26A

Bisector(A, B, C, D) = a rotation or reflections of gradients $(\beta(1,0), (0,1), \beta(1,0), (0,-1))$



$$\text{widthCA} = x_C - x_A$$

$$\text{widthBD} = y_B - y_D$$

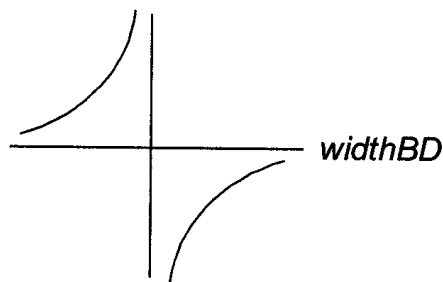
$$\text{CriticalArea} = -k \frac{\text{widthCA}}{\text{widthBD}}$$

$$\text{widthCA} \geq 0$$

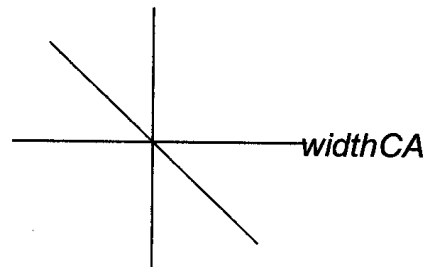
$$\text{widthBD} \geq 0$$

FIG. 26B

FIG. 26C



$$\text{widthBD} = 0$$

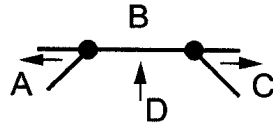


$$\text{widthCA} = 0$$

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FIG. 27A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((-1,0), \beta(0,1), (1,0), (0,1))$



$$\text{widthCA} = x_C - x_A$$

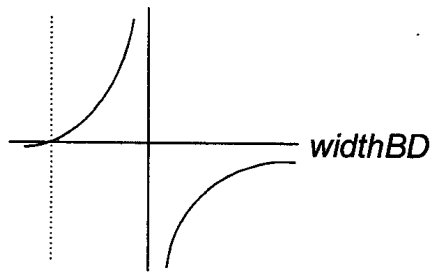
$$\text{widthBD} = y_B - y_D$$

$$\text{CriticalArea} = -\frac{k}{2} \frac{\left(\frac{1}{2}\text{widthCA} + \text{widthBD}\right)}{\text{widthBD}}$$

$$\frac{1}{2}\text{widthCA} + \text{widthBD} \geq 0$$

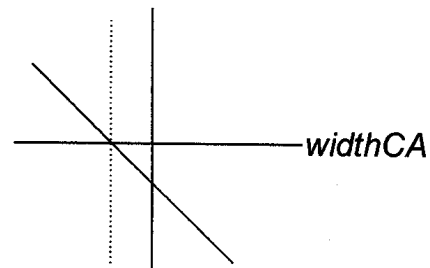
$$\text{widthBD} \geq 0$$

FIG. 27B



$$\frac{1}{2}\text{widthCA} + \text{widthBD} = 0$$

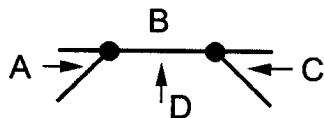
FIG. 27C



$$\frac{1}{2}\text{widthCA} + \text{widthBD} = 0$$

FIG. 28A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((1,0), \beta(0,1), (-1,0), (0,1))$



$$\text{widthCA} = x_C - x_A$$

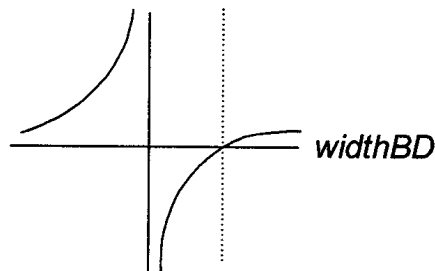
$$\text{widthBD} = y_B - y_D$$

$$\text{CriticalArea} = -\frac{k}{2} \frac{\left(\frac{1}{2}\text{widthCA} - \text{widthBD}\right)}{\text{widthBD}}$$

$$\frac{1}{2}\text{widthCA} - \text{widthBD} \geq 0$$

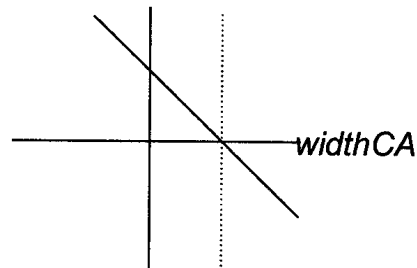
$$\text{widthBD} \geq 0$$

FIG. 28B



$$\text{widthCA} - \text{widthBD} = 0$$

FIG. 28C

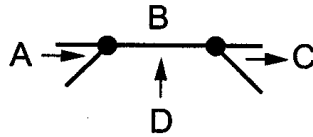


$$\text{widthCA} - \text{widthBD} = 0$$

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FIG. 29A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((1,0), \beta(0,1), (1,0), (0,1))$



$$widthCA = x_C - x_A$$

$$widthBD = y_B - y_D$$

$$CriticalArea = -k \frac{widthCA}{4widthBD}$$

$$widthCA \geq 0$$

$$widthBD \geq 0$$

FIG. 29B

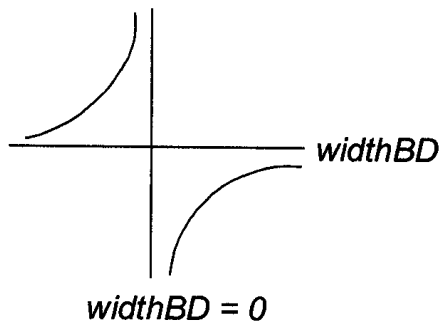


FIG. 29C

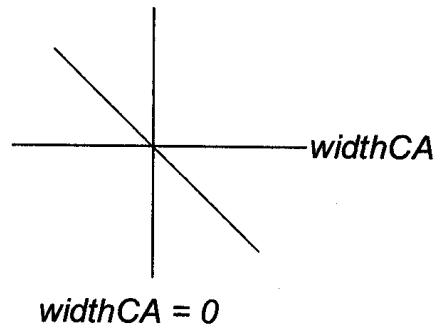
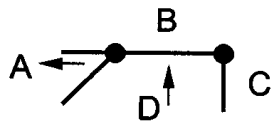


FIG. 30A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((-1,0), \beta(0,1), \beta(1,0), (0,1))$



$$widthCA = x_C - x_A$$

$$widthBD = y_B - y_D$$

$$CriticalArea = -\frac{k (widthCA + widthBD)}{4widthBD}$$

$$widthCA + widthBD \geq 0$$

$$widthBD \geq 0$$

FIG. 30B

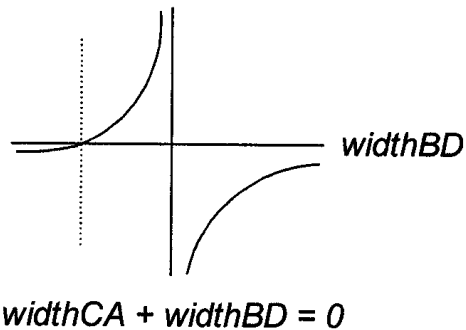
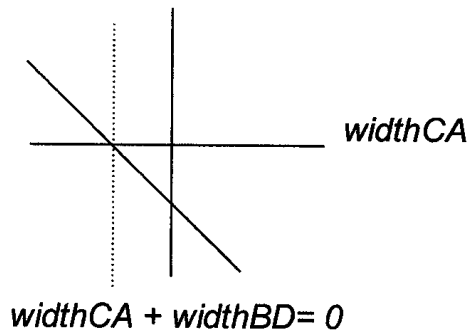


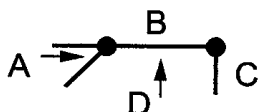
FIG. 30C



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FIG. 31A

Bisector(A, B, C, D) = a rotation or reflection of gradients $((1,0), \beta(0,1), \beta(1,0), (0,1))$



$$\text{widthCA} = x_C - x_A$$

$$\text{widthBD} = y_B - y_D$$

$$\text{CriticalArea} = -\frac{k(\text{widthCA} - \text{widthBD})}{4\text{widthBD}}$$

$$\text{widthCA} - \text{widthBD} \geq 0$$

$$\text{widthBD} \geq 0$$

FIG. 31B

FIG. 31C

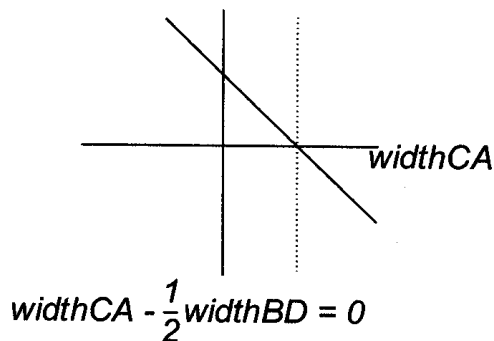
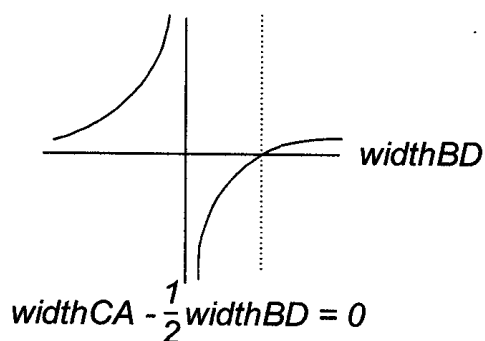
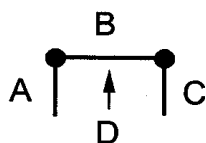


FIG. 32A

Bisector(A, B, C, D) = a rotation or reflection of gradients $(\beta(1,0), \beta(0,1), \beta(1,0), (0,1))$



$$\text{widthCA} = x_C - x_A$$

$$\text{widthBD} = y_B - y_D$$

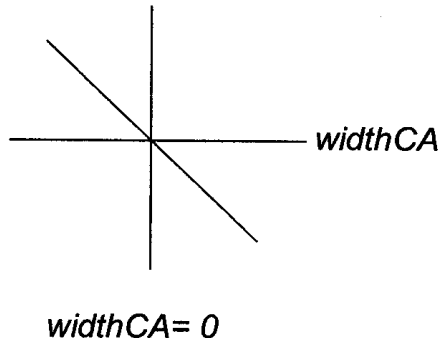
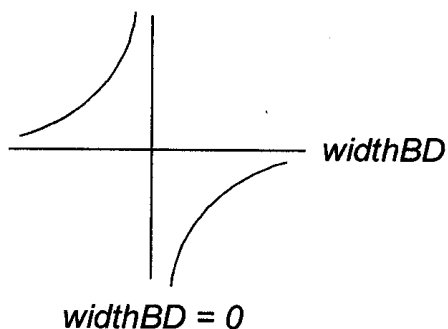
$$\text{CriticalArea} = -k\frac{\text{widthCA}}{4\text{widthBD}}$$

$$\text{widthCA} \geq 0$$

$$\text{widthBD} \geq 0$$

FIG. 32B

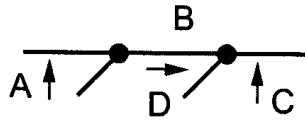
FIG. 32C



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FIG. 33

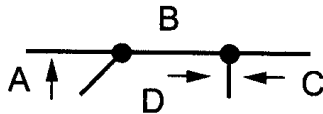
Bisector(A, B, C, D) = a rotation or reflection of gradients $((0,1), \beta(0,1), (0,1), (1,0))$



Ignored. No contribution to critical area.

FIG. 34

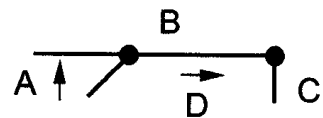
Bisector(A, B, C, D) = a rotation or reflection of gradients $((0,1), \beta(0,1), (-1,0), (1,0))$



Ignored. No contribution to critical area.

FIG. 35

Bisector(A, B, C, D) = a rotation or reflection of gradients $((0,1), \beta(0,1), \beta(1,0), (1,0))$



Ignored. No contribution to critical area.

FIG. 36

